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**Small Trash Receptacles That Use Plastic Bags
As Liners**

by

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CERTIFICATION

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**TITLE: SMALL TRASH RECEPTACLES THAT USE PLASTIC BAGS
 AS LINERS**

Technical Field of the Invention

5 The present invention relates generally to trash receptacles adapted to use plastic bags as liners, methods of marketing trash receptacles, and methods of using them in advertising.

Background of the Invention

10 Paper grocery bags have largely been replaced by bags made from flexible plastic film. A typical consumer receives a large number of plastic grocery bags every year as a natural result of patronizing supermarkets and other retail stores that use plastic grocery bags.

15 Many consumers, whether out of a desire to save money, conserve resources, or reduce the waste inherent in the widespread use of plastic, seek to get a second use out of plastic grocery bags as trash receptacle liners. Plastic grocery bags by themselves are not generally used as trash receptacles because they collapse into a limp pile when placed unsupported on the floor.

20 Plastic grocery bags do not function very well as liners in trash receptacles not specifically designed to receive them. Typically, trash receptacles are either too small or too large and do not contain fittings to hold plastic grocery bags in place. As a result, most consumers do not get a second use out of most of their plastic grocery bags. There has been a long felt need for trash receptacles adapted to use plastic grocery bags as liners

25 Recognizing this need, many inventors have come forth with their proposals and many patents have been issued for trash receptacles adapted to use plastic grocery bags as liners. However, the vast majority of consumers have never seen or heard of one of these trash receptacle ideas.

 The present inventor satisfied a long felt need for a commercially viable trash receptacle that adequately addressed the needs of consumers interested in using plastic grocery bags as trash receptacle liners. For marketing purposes, the inventor

constructed a miniaturized version of that trash receptacle. It subsequently became apparent that this miniaturized version had myriad uses and is an invention in its own right, which is the subject of the present application.

Summary of the Invention

5 The following presents a simplified summary of the invention in order to provide a basic understanding of some of its aspects. This summary is not an extensive overview of the invention and is intended neither to identify key or critical elements of the invention nor to delineate its scope. The primary purpose of this summary is to present some concepts of the invention in a simplified form as a
10 prelude to the more detailed description that is presented later.

 One aspect of the invention relates to a trash receptacle adapted to use a plastic bag as a liner. The trash receptacle has side walls with fittings and an opening in the back. A plastic bag can be supported in an up-and-open position by coupling the bag to the side wall fittings and pulling a portion of the bag through the opening in the
15 back. This support arrangement is particularly useful for small plastic bags.

 Another aspect of the invention relates to a small trash receptacle adapted to use a plastic bag as a liner. The trash receptacle has walls, but its front is at least partially open. The open front provides advantages including keeping a logo on a plastic bag within the trash receptacle visible to a user over an extended period of time
20 and making contents of the bag more visible.

 A further aspect of the invention also relates to a small trash receptacle adapted to use a plastic bag as a liner. According to this aspect of the invention, the trash receptacle has a backboard. The backboard provides an excellent position to place advertising or a label, as well as facilitating disposal of trash within the bag.

25 A still further aspect of the invention relates to a small trash receptacle adapted to use small T-shirt bags as liners. According to this aspect of the invention, the walls have fittings to hold a T-shirt bag in an open position. The fittings hold the T-shirt bags no more than twelve inches up, making the receptacle adapted for T-shirt bags that are smaller than conventional plastic grocery bags. The receptacle/bag

arrangements are convenient for storage and display, as well as capturing small bits of trash.

Other advantages and novel features of the invention will become apparent from the following detailed description of the invention and the accompanying drawings. The detailed description of the invention and drawings provide exemplary embodiments of the invention.

Brief Description of the Drawings

Figure 1 is an illustration of small trash receptacle according to one embodiment of the present invention using a T-shirt bag as a liner.

Figure 2 is an illustration of the trash receptacle of Figure 1 with its back tipped toward the user.

Figure 3 is an illustration of a trash receptacle according to another embodiment of the invention with a plastic bag pulled through an opening in the back.

Figure 4 is an illustration of the trash receptacle of Figure 3 with a portion of the plastic bag pulled forward.

Figure 5 is an illustration of the trash receptacle of Figure 4 with the pulled-forward portion of the trash bag curled over.

Figure 6 is an illustration of the trash receptacle of Figure 5 with the curled-over portion looped around the sides between the forward handle slots and the front of the receptacle. The portion pulled through the opening in the back has been pulled again to make the opening taut.

Figure 7 is a layout for a cardboard trash receptacle according to another embodiment of the present invention.

Figure 8 illustrates a cardboard trash receptacle according to the layout of Figure 7 folded into a compact shape for shipping.

Figure 9 illustrates a cardboard trash receptacle according to a further embodiment of the present invention.

Figure 10 is a layout for the trash receptacle of Figure 9.

Figure 11 illustrates a cardboard trash receptacle according to a further embodiment of the present invention.

Figure 12 is a layout for the trash receptacle of Figure 11.

Figure 13 illustrates a cardboard trash receptacle according to a further embodiment of the present invention.

Figure 14 is a layout for the trash receptacle of Figure 13.

Detailed Description of the Invention

Figure 1 is an illustration of a trash receptacle 100 according to a preferred embodiment of the present invention. The trash receptacle 100 includes handle slots 101, side walls 103 and 105, a back 107, a base 109, and a reservoir panel 115. The back 107 includes a backboard 111. The front of the trash receptacle 100 is open. The trash receptacle 100 is shown with a plastic T-shirt bag 120 with its handles inserted in handle slots 101.

The trash receptacle 100 is small. For purposes of the present application, with reference to a rectangular trash receptacle, a small trash receptacle is from about 4 to about 10 inches wide, preferably from about 6 to about 7 inches wide, from about 3 to about 8 inches deep preferably from about 4 to about 5 inches deep, from about 4 to about 18 inches high, preferably from about 6 to about 12 inches high. The height is measured excluding the backboard, if one is present. Small trash receptacles that are round, oval, and otherwise-shaped will have a similar volume and similar height. Preferably, a small trash receptacle holds a trash bag from about 4 to about 12 inches up, more preferably from about 5 to about 10 inches up, most preferably from about 6 to about 7 inches up. In this context, height is measured with a free standing trash receptacle on a level surface.

Small trash receptacles with plastic bag liners have myriad uses. They are handy for tossing small pieces of trash, such as orange rinds, peanut shells, and tea bags. They can be placed in kitchens, bathrooms, cars, desks, counter-tops, buffet tables, kid's tables, work benches, and picnic tables. Their small size makes them highly portability and facilitates convenient placement. They are useful for storage and display, particularly when provided with an open front that reveals the bag contents. Small trash receptacles can be decorative, particularly where the plastic bag does not cover a substantial portion of the receptacle.

In a preferred embodiment, handle slots 101 are adapted to receive the handles of a T-shirt plastic bag. A "T-shirt bag" has two loops that serve as handles. Pairs of handle slots 101 on either side are preferably from about 2 to about 5 inches apart, more preferably from about 3 to about 4 inches apart. The handle slots 101 preferably descend to within about 4 to about 12 inches of the base 109, more preferably to within about 5 to about 10 inches, most preferably to within about 6 to about 7 inches. The descent of the handle slots 101 corresponds with the height at which the receptacle 100 holds the plastic bag 120.

Handle slots are easy to use and easy to form, however, the trash receptacle 100 can be provided with alternate means for holding a T-shirt or other plastic bag in an up-and-open position. Suitable alternate means include, without limitation, hooks, clamps, and pegs. The mounting means can be formed in or on the side walls 103 and 105, the back 107, or any other walls of the receptacle. They can protrude in or out of the trash receptacle 100. For example, in one design the mounting means also serve as handles protruding from the sides of the trash receptacle 100 and the T-shirt bag 120 is mounted by wrapping the bag handles over the tops of the side walls 103 and 105 and looping the bag handles around the trash receptacle handles.

Handle slots 101 are formed in side walls 103 and 105. The handle slots 101 that are opposite one another on side walls 103 and 105 respectively are preferably from about 4 to about 10 inches apart, more preferably from about 6 to about 8 inches apart. The trash receptacle 100 is shown in a rectangular design, where side walls 103 and 105 are easily identified separate from the back and front of the trash receptacle 100. However, the trash receptacle 100 can be round, oval, or some other shape, in which case the receptacle could simply be described as having walls and the handle slots 101 or other mounting means would be formed in the walls.

The trash receptacle 100 has two handle slots 101 formed close enough to the back 107 to make small or eliminate the space between the opening of the bag 120 and the back 107. When this space is small or absent, trash deflected from backboard 111 has little chance of falling between the bag 120 and the backboard 111.

The backboard 111 is part of the back 107. In the context of a trash receptacle of the present invention, a backboard is defined as a wall portion, or extension to a

5 wall portion, that extends substantially above the opening of a plastic bag when the bag is mounted in the trash receptacle. A wall portion that rises only slightly above the upper edge of the plastic bag, only half or one inch for example, due to the position of mounting mean for the bag, would not be considered a backboard. If the wall portion rises one or more inches above the upper edge of the bag, however, it can be considered a backboard. Generally, the average height of a back having a backboard is greater than the average height of the other walls of a trash receptacle.

10 While the backboard 111 is part of the panel forming the back 107, the backboard can also be a separate panel. The side walls 103 and 105 are angled in part to provide support for the backboard 111. The side walls 103 and 105 slope upwards to meet the backboard.

15 The backboard 111 facilitates directing trash into the bag 120. This is a practical feature, but can also add entertainment to using a trash receptacle according to the present invention. When the trash receptacle 100 is placed back-to-front, the backboard 111 can serve to hide the contents of the bag 120. Angled side walls 103 and 105 cooperate with the backboard 111 to facilitate these functions.

20 Another use of a backboard is illustrated in Figure 2. In this use, the backboard 111 is grasped and pulled toward the user, tipping the trash receptacle 100 and making the opening of the bag 120 more accessible. The backboard 111 is optionally provided with a flap 113 or other protrusion to facilitate grasping and tipping. Other protrusions that can be grasped to facilitate tipping include a handle or knob. With the trash receptacle 100 tipped, trash is thrown into the bag 120 and then the trash receptacle 100 is released or tipped back to its starting position. In this context, the term backboard is something of a misnomer in that the trash receptacle
25 100 will typically be placed so that the back 107 faces the user.

30 The backboard 111 provides a convenient or useful place for advertising. The angled portions of side walls 103 and 105 also provide advertising space. An advertisement, such as a logo, can be placed on the inward facing side of the backboard 111, as illustrated in Figure 1, or on the outward facing side, as illustrated in Figure 2.

Another advantage of backboard 111 is that it provides a convenient place for a label. Trash containers according to the present invention are typically useful for storing and/or displaying items. When used in this manner, the backboard 111 is conveniently used to label contents for the trash container. In one embodiment, the backboard 111 is provided with blank space for writing a label.

Another feature of the trash receptacle 100 is its open front. An open front provides the following advantages: keeping a logo 121 on the bag 120 visible to a user over an extended period of time; making the level of trash in the bag 120 more visible to the user; making the contents of the trash bag 120 visible, particularly when the bag 120 is transparent; and facilitating easy removal of the bag 120 from the trash receptacle 100. An open front can also function to facilitate display of advertising on the back 107, the side walls 103 and 105, and/or on the base 109.

Many of the benefits of an open front can be realized by a partially open front. For purposes of this disclosure, a partially open front is defined as a front that is at its lowest point at least about 2 inches lower than the lowest point of the side walls, more preferably at least about 3 inches lower, and still more preferably at least about 4 inches lower.

An additional feature of the trash receptacle 100 is the base 109 and the reservoir panel 115. The base 109 preferably encloses the bottom of the trash receptacle 100. The reservoir panel 115 adds volume to this enclosure, and catches waste spilled from the trash bag 120. Preferably, the reservoir depth is from about 2 to about 1/4 inch, more preferably from about 1 to about 1/2 inch. An open front facilitates cleaning the base 109. The reservoir panel 115 reinforces the bottom of the trash receptacle 100 and extends its life. In one embodiment, the reservoir panel 115 is made thicker than the other panels or doubled to facilitate this function.

Figure 3 is an illustration of a trash receptacle 150 according to another embodiment of the present invention. The trash receptacle 150 has fittings for holding both T-shirt bags and plastic bags that do not have handles. The fittings for holding plastic bags without handles are useful for both small and large trash receptacles. The trash receptacle 150 includes, side walls 151, a back 153 and an open front. Forward

slots 161 and back slots 167 are formed in the side walls 151. The back 153 contains an opening 163.

Figures 3 through 7 illustrate a method of mounting a plastic bag 170 without handles in the trash receptacle 150. A portion 175 of the plastic bag 170, including a portion of its open end 171, can be pulled through the opening 163 in the back 153, as illustrated in Figure 3. Two points along the open end 171 of the plastic bag 170 are grasped and pulled forward, as illustrated in Figure 4. These two points are folded over to form a lip 173, as illustrated in Figure 5, and the lip 173 fitted through forward slots 161 and wrapped around the forward tips 165 of the side walls 151 as illustrated in Figure 6. Where the back opening 163 is appropriately formed, the portion 175 of the plastic bag 170 pulled through the back opening 163 can be pulled again to make taut the bag opening 171. A taut bag opening facilitates use of the bag 170.

Variations on this method include alternate fittings on the forward end of the receptacle and pulling the portion 175 of the plastic bag 170 through the back opening 163 after coupling to the forward fittings.

The fittings used to hold a plastic bag without handles in the trash receptacle 150 includes the forward slots 161, the partially open front that allows the bag 170 to be wrapped around the forward tips 165, and the opening 163 in the back 153. The fittings 161 are preferably slots. Other fittings include, without limitation, hooks, clamps, and pegs. Whatever fittings are used, preferably they are configured so that while in use, the exterior of the trash receptacle remains largely visible and is substantially not obscured.

The trash receptacle 150 has fitting that support at least two sizes of plastic bags. Using the slots 161 and 167, bags with mouth openings as large or somewhat smaller than the mouth of the trash receptacle 150 can be supported. Using the forward slots 161 and the back opening 163, bags with mouth openings larger than the mouth of the trash receptacle 150 can be supported. The size of the mouth of a trash receptacle is its circumference at the height at which it holds the mouth of a bag. For trash receptacle 150, the mouth size is two times the width of the back 153 plus two times the width of the sides 151. The size of a plastic bag mouth is also determined by circumference, rather than area.

Where the trash receptacle is decorated, displays advertising, or bears a label, leaving the receptacle substantially not obscured is an aesthetic or functional advantage. When the plastic bag substantially obscures the receptacle, the bag itself tends to be the most salient feature of the bag-receptacle arrangement and generally gives an unattractive appearance. Preferably the fittings are such that when used in casually mounting a plastic bag in the trash receptacle, the plastic bag covers no more than 20% of the outer surface area of the trash receptacle sides, more preferably no more than 10%. Preferably, the plastic bag does not significantly affect the aesthetics of the trash receptacle-bag arrangement when viewed from a side.

In a preferred mounting arrangement the plastic bag is not substantially doubled in front. In an open front receptacle, this means that the contents of a clear bag are seen through a single layer of plastic, as opposed to two layers of plastic. The single layer result is preferably achieved with casual, rather than meticulous placement of the plastic bag. The distinction here is that a substantially single layer mounting is achieved by casual placement on a trash receptacle such as 150 as illustrated in Figures 3 through 6 because the forward slots 161 generally limit the descent of the lip 173. On the other hand, taking for example a wire frame receptacle without slots 161, where the plastic bag 170 is held by folding the open end 171 all around the outside of the receptacle, a substantially single layer mounting would be considered to require meticulous placement because there is nothing to limit the descent of the folded over portion and there is a natural tenancy to cover a substantial portion of the receptacle exterior in fitting the bag over the receptacle.

The opening in the back 153 can have any suitable size and shape and can be, for example, a slot, an oval, or a round hole. The back opening 163 illustrated in Figures 3 and 4 is relatively narrow in width and gives the bag opening 171 a trapezoidal shape that is almost triangular. A wider back opening, which can extend the full width of the back 153, allows the bag opening 171 to be wider and approach rectangular in shape. Where the back opening is high enough to admit fingers, the opening can serve as a handle as well. In one embodiment, the back opening comprises the oval shape illustrated in Figures 3 and 4 extended by a slot spanning nearly the width of the back 153. This shape allows easy threading of the bag 170 and

maximum size and tautness for the bag opening 171. Preferably, the back opening is sized to hold the bag opening 171 in a conventional produce bag, which lacks handles, taut. A conventional produce bag is the kind commonly provided to grocery store customers for placing their vegetable selections. The mouth of a conventional plastic bag is from about 24 to about 30 inches in circumference.

Trash receptacles of the present invention can be formed of any suitable material. Depending on the material, the trash receptacle can either be a disposable type or a durable good type. Preferably, a disposable type is biodegradable. In one embodiment, the trash receptacle is disposable and made of corrugated cardboard, which is biodegradable. Examples of durable trash receptacles include trash receptacles made of plastic and ones made of plastic coated cardboard. A plastic trash receptacle is preferably formed by injection molding and provides the advantage of easy cleaning. Cardboard trash receptacles are inexpensive and easy to print on, and are therefore particularly adapted for use in advertising.

Figures 7 and 8 illustrate the layout for a cardboard trash receptacle 200 according to another embodiment of the invention. Fold lines 201, 203, and 205 separate back panel 207 from side panels 209 and 211 and base panel 213. The back panel 207 optionally include punch-out handle 215. Handle slots 217 are formed in the side panels 209 and 211. A logo 219 can be formed on the upper portion of the back panel 207, which serves as a backboard.

The cardboard trash receptacle 200 can be folded into the compact shape shown in Figure 8 for shipping. Fold lines 201 and 203 can diverge as they extend from fold line 205, making the top of the trash receptacle 200 wider than the bottom to allow stacking of trash receptacles 200 after assembly. Stackability eases transportation of folded trash receptacles and conserves storage and display space. Stackability is preferred in all embodiments of the present invention, particularly those made of rigid materials such as plastic. Optionally, glue can be applied to the receptacle 200 prior to shipping. The glue can be covered by strips that are removed to expose the glue at the time the receptacle 200 is assembled.

Figures 9 illustrates a cardboard trash receptacle 300 according to a further embodiment of the present invention and Figure 10 illustrates a layout for it. The

trash receptacle 300 has a partially front 301 that provides structural strength, decorative possibilities, and additional advertising space while also leaving the trash receptacle 300 with a partially open front and the concomitant benefits.

5 Figures 11 illustrates a cardboard trash receptacle 400 according to a still further embodiment of the present invention. Figure 12 is a layout for the trash receptacle 400. The trash receptacle 400 has a base 401 that is reinforced by several panels, including panels 403, 405, 407, and 409.

10 Figures 13 illustrates a cardboard trash receptacle 500 according to a still further embodiment of the present invention. Figure 14 is a layout for the trash receptacle 500. The trash receptacle 500 has a double layer reservoir panel 501 that can be attached to sides 503 and 505 to provide improve structural strength.

15 Preferably, trash receptacles of the present invention include an advertisement. An advertisement can be a message or a company logo. Advertising can be placed in any suitable location on the trash receptacle. The backboard of the trash receptacle, where provided, is the preferred location for advertising. Advertisements can be formed on the trash receptacles by any suitable means. Printing is preferred for cardboard trash receptacles. Pressure sensitive labels are preferred for plastic trash receptacles.

20 Another aspect of the present invention relates to marketing. According to the present invention, a small trash receptacle adapted to use plastic bags as liners is offered as either an advertising specialty or as a marketing premium. The present invention recognizes that the popularity of bag-holding trash receptacles is likely to depend on retailers using them as advertising media and methods of building good will, as opposed to treating them like other goods with any advertising function being merely incidental.

25 An advertising specialty, as defined for purposes of this application, is an item bearing the advertiser's message and given to a group of people without any cost or specific purchase obligation. For example, patronizing a store is not considered a specific purchase obligation and the plastic grocery bags given to customers are an advertising specialty. According to the present invention, trash receptacles bearing a

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logo or other advertisement are given to select groups of people, such as store customers, free of charge.

Used as an advertising specialty, trash receptacles of the present invention offer a variety of benefits. They act as mini-billboards, keeping the advertiser's name or message in front of the consumer over an extended period of time. This function is further enhanced by offering the trash receptacles in decorative or eye catching designs that encourage users to keep the trash receptacles in public locations. They also build goodwill by associating the advertiser with conservation, efficiency, and utility.

A marketing premium, as defined for purposes of this application, is an item that is sold or, on the satisfaction of some specific purchase obligation, given away. When the trash receptacles are used as a marketing premium that bears the advertiser's message, they provide many of the same benefits as an advertising specialty.

In one embodiment of the present invention, trash receptacles are used as a marketing premium in a continuity promotion. A continuity promotion involves a series of items that can be collected as a set. In the present invention, customers are offered a series of collectible trash receptacles that are adapted to use plastic bags as liners.

A series of collectible trash receptacles generally follow a theme. Examples of themes include holiday patterns, e.g., Saint Valentine's Day, Saint Patrick's Day, Christmas, seasonal patterns, e.g., Spring, Summer, Fall, Winter, and manufacturer oriented patterns, e.g., featuring Proctor & Gamble products such as toothpaste, soap, and cereals.

A continuity promotion using trash receptacles of the present invention as the marketing premium can be either a profit-building type or a traffic-building type. As a profit-building type, sales of the trash receptacles themselves generate a profit. As a traffic-building type, the trash receptacles are sold at a low or subsidized price to encourage consumers to continue patronizing certain retailers.

Although the invention has been shown and described with respect to certain embodiments, alterations and modifications providing equivalent structures and acts

are likely to occur to those of ordinary skill in the art upon the reading and understanding this specification and the associated drawings. Such alterations and modifications are intended to fall within the scope of the present invention, unless expressly stated to the contrary. Components described in functional terms have
5 structure and involve acts, unless otherwise indicated, corresponding to any of the devices and methods known to those of ordinary skill in the art to perform those functions, even though not equivalent to any of the structures and acts that perform those function in the exemplary embodiments of the invention. In addition, while a particular feature of the invention may have been disclosed with respect to only one of
10 several embodiments, such feature may be combined with one or more other features of the other embodiments as may be desired or advantageous for a given or particular application.